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(Quoted from the Constitution)

"To promote the study and dissemination of knowledge of the cause, prevention and control of diseases of the teeth, their supporting structures and adnexa and related subjects; and to foster and promote a better scientific understanding between the fields of dentistry and medicine."

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* In accordance with the Constitution.

PRESIDENT'S ADDRESS*

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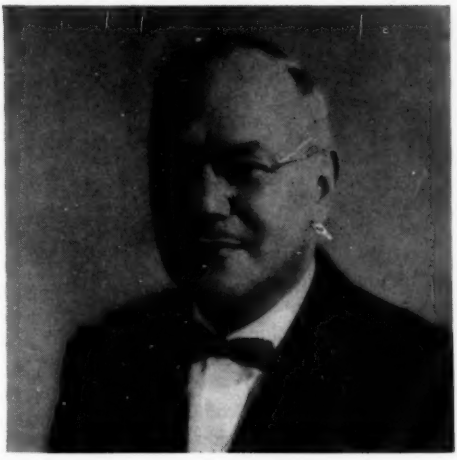

There is a natural tendency and desire on the part of each newly-installed President in any organization to sponsor radical changes in administrative procedures so that he may leave an indelible impression of his tenure of office upon the history of the organization. To follow such a plan in the Academy, however, may create a threat to its stability and smoothness of operation. A careful examination of the present state of the Academy reveals that there is no need for instituting startling innovations.

This does not mean there is no room for improvement. No organization can long exist without a constant re-evaluation of its basic philosophy in the light of newer and advanced concepts. The American Academy of Dental Medicine is no exception to this rule. With this in mind, your President submits for your consideration the following program for the ensuing year.

1. While numerical expansion may, to some degree, be encouraged, we should always remain selective in our choice of applicants for affiliation. The very term "Academy" is defined as an institution for advanced and higher learning. Hence, it is necessary that applicants for membership, by their accomplishments, shall have earned the privilege of membership and we should exercise extreme care in sponsoring applicants. If we stray from this requirement we shall be classified as just another dental society.

2. Our greatest opportunities for self-improvement lie in the avenues of internal expansion. This can best be accomplished by:

a. The continued development of outstanding Annual and Mid-Winter meetings in order to stimulate attendance and maintain interest in our work.

b. The Journal is our only means of keeping in close contact with the entire membership and consideration should be given to the enlargement of its scope and size.

c. The formation of new Sections wherever possible throughout the country and abroad.

These three items are the stepping stones leading to a better understanding of, and greater appreciation for the ideals and purposes upon which the Academy is based. They lie easily within our reach.

Your officers can do no more than provide plans which, we believe, will accrue to the greatest benefit to our members. Membership participation, however, remains the most significant and important single contributory factor in attaining our goal. Success will be in proportion to the efforts expended by each one of us and it is everyone's responsibility to give of himself, his time and his knowledge if we are to have that success.

Your wholehearted cooperation is necessary and is respectfully solicited.

* Presented before the Seventh Annual Meeting of the American Academy of Dental Medicine, Washington, D.C., June 26-28, 1953.

PRACTICAL PRESCRIPTION PROCEDURES IN VITAMIN THERAPY—A PRELIMINARY REPORT

SAMUEL C. MILLER,* D.D.S., F.A.C.D., F.A.D.M.
HARRY ROTH,† B.S., D.D.S.
MARVIN SIMRING,‡ B.A., D.D.S.

AIM

This study was undertaken for the following purposes:

(1) To develop a guide for the clinical study of various vitamin preparations in stomatologic therapy.

(2) To determine some common clinical indications and diagnostic criteria for vitamin prescriptions.

(3) To determine the role of these vitamin preparations as an adjunct to complete dental and periodontal therapy.

METHOD

A group of 40 patients who presented themselves for treatment at the Periodontia Clinic of New York University College of Dentistry, were chosen at random for this investigation. All gave evidence of pathosis of the periodontal tissues and/or oral mucosa. Experimental vitamin therapy was instituted before any other treatment in order to determine the role of the vitamins in the total disease syndrome, while all other dysfunctional, irritative and systemic etiologic factors were still operating.

Many of the symptoms recorded in the chart could well be of a neurogenic nature. Such results as "happier, better appetite" (case 8); "headaches less frequent, not as tired. . . ." (case 14); "dizziness and headaches gone, pain in legs gone, burning decreased in lower incisor area" (case 39) and other similar ones might be construed as the result of the psychotherapy of taking medicine rather than any actual therapeutic result of the vitamins. Therefore controls were essential. Inasmuch as these patients came to the clinic for treatment and not for experimental purposes, controls were necessarily limited to no more than six patients. In these cases by withdrawal and subsequent restoration of vitamin therapy, the patients were allowed to serve as their own controls. The following vitamin preparations were used:

1. Therapeutic general vitamin supply (Theragran): Vit. A.—25,000 U.S.P. Units; Vit. D.—1000 U.S.P. Units: Thiamin Hydrochloride (B_1) 10 mg.; Riboflavin (B_2) 5 mg.; Niacinamide 150 mg.; Ascorbic Acid (C) 150 mg. (Vit. A & D derived from fish liver oil and irradiated ergosterol.)
2. Partial Vitamin Supplements (Basic Formula): 10 mg. Thiamin HCL; 5 mg. Riboflavin-B_{12}; 150 mg. Niacinamide; 150 mg. Ascorbic Acid—Vitamin C.
3. Desiccated Liver: 0.5G. Dehydrated unfractionated edible liver equivalent to approximately 2G. of fresh liver; Protein approx.—65%.
4. Rutin and Vitamin C: 20 mgm. Rutin; 100 mgm. Ascorbic Acid.
5. Combination of Therapeutic and Desiccated Whole Liver.
6. Vitamin A Capsules: 50,000 Units.
7. Rutin: 60 mgm.

Each patient was given one or another or a combination of the above preparations.

A chart for aid in diagnosis was developed by the authors and used in this study. (See Fig. 1.) This chart conveniently lists the common

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TABLE I—EXPERIMENTAL DATA OF SYMPTOMS, TREATMENT AND RESULTS

* Duration of treatment in days (D), weeks (W) or months (M).
† Medications used are indicated by letters as follows:

(T)	Theragran (Squibb)
(A)	Vitamin A. Capsules—50,000 units ea. (Squibb)
(B)	Basic Formula Vitamin Tablets (Squibb)
(C)	Ascorbic Acid Tablets—250 mg. ea. (Squibb)
(CR)	Rutorbin Tablets—20 mg. rutin & 100 mg. ascorbic acid, ea. (Squibb)
(L)	Desiccated Liver Capsules (Squibb)
(R)	Rutin Tablets—60 mg. ea. (Squibb)

‡ Numerals refer to the number of capsules or tablets administered daily.

TABLE I—EXPERIMENTAL DATA

Case No.	*Duration of Treatment**	*Medications† Daily Dose‡*	*Results*
1.	3W	T3	Aphthae healed; less tired.
2. a.	2W	CR3	No change.
b.	6W	T3 L9 C2	No change.
3.	4W	T3 L12	Menses more regular; better appetite; not so tired; gums less sore; very little bleeding.
4. a.	6W	T3 L12	Partial improvement in gingival bleeding, tone, and color; cheilosis and seborrhea (right ear) improved.
b.	2W		Relapse.
5.	10D	B3	No change.
6. a.	4W	R6	Bleeding and enlargement diminished followed by mild relapse.
b.	3W	T3	Further improvement: bleeding 1+.
c.	4W	—	Gingival bleeding returned to 4+.
7. a.	1W	C3	Worse.
b.	3W	R3	Bleeding stopped.
c.	3D	—	Bleeding recurred.
8.	6W	R3	Bleeding diminshed to 1+.
9.	2D	B6	Happier; better appetite; bleeding diminished to 1+.
10.	3W	C2	Bleeding diminished to 1+; gingival color and tone improved.
11.	4W	B3	Bleeding decreased to 2+. Clinical appearance of gingiva improved.
12.	6W	T3 L9	More energy; better appetite; gaining weight; leukoplakia gone.
13. a.	2W	R6	Swelling reduced; slight decrease in bleeding.
b.	5W	R9	Marked improvement; bleeding only scant 1+.

14.	a.	6W	T3 L12	Improvement; "felt better" generally and was more energetic.
	b.	2W	—	General relapse of all symptoms.
15.	a.	5W	B3 L6	Headaches less frequent; not as tired nor as constipated.
	b.	2W	T3 L12	Backaches gone; very few headaches; no constipation; not tired; "feels better."
	c.	2W		Symptoms starting to return.
16.	a.	3W	R9	Condition slightly worse.
	b.	2W	T3 L12	No change.
	c.	1W	C6	Less bleeding; gingival color markedly improved.
17.		10D	B3	Felt better; "never tired now," gingival bleeding diminished.
18.		1W	B3	Bleeding the same; tissue tone appears much better.
19.	a.	9D	T3 L18	Gingiva less painful; bleeding stopped; appetite increased; gained weight; premenstrual tension decreased; less "nervous."
	b.	2W	T3 L9	Gingiva pinker; feels that cutting down on capsules made her "weaker."
	c.	2W	—	Symptoms recurred after tenth day.
	d.	1W	T3 L9	Bleeding stopped again; "feels better."
20.		2W	B3	Bleeding diminished.
21.		1M	B3	Bleding reduced from copious 4+ to mild 2+; plays longer; doesn't tire as easily.
				Bleeding reduced to mild 1+.
23.		6W	T3 L12	Cheek aphthae better; numbness of hands gone; gingivae feel better.
24.		10D	B6	Gained weight; more energetic; feels vigorous.
25.		4W	B6	Tongue feels better when eating but not when smoking.
26.		5D	B3 L12	Less bleeding; sleeps better.
27.		2W	3T A3 L18	Sleeps better; appetite improved.
28.		3W	T3 L12	Sleeps btter; feels better; gained weight; no more apthae.
29.		1W	C2	Bleeding on pillow diminished and then ceased by the third day; gingiva bled again for one day during menstrual period.
30.		1W	B3	Burning disappeared.
31.		1M	B3 L9	Cheilosis healed; felt "all better."
32.		2W	B3	Improvement in aphthae.
33.	a.	1W	B3 L9	Sleeps better; still feels numbness; appetite better; diarrhea gone.
	b.	3W	T2 L9	Tongue not sore; feels better generally.

34.	a.	2W	A2 T2	No change.
	b.	10D	T3 L8	No change.
35.		1W	R3	No change.
36.	a.	3W	T3 L18	Felt "more alive;" fainting, vomiting and numbness disappeared.
	b.	1M	T3 L12	Tongue better; feels even better generally.
37.		2W	R3	No change.
38.		2W	B3	Pain left in three days; redness and slough decreased; bleeding disappeared after 2 weeks; unpleasant mouth odor and taste still present.
39.		2M	B3	Dizziness and headaches gone; pain in legs gone; burning decreased in lower incisor area.
40.		10D	T3 L9	Less tired; felt better generally.

vitamin deficiency symptoms. It simplifies and standardizes history taking—by—

(A) Providing leading questions to be asked concerning symptoms.

(B) Listing the signs to be observed by the dentist.

Any changes resulting from vitamin therapy alone, independent of other factors, could thus be recorded and studied. This chart may also be used for recording the case progress.

A simplified method for distinguishing the degree of hemorrhagic state and easy recording was developed by one of us (H.R.) [1] and may be summarized as follows:

\+ Bleeding on toothbrushing alone.
++ Bleeding on biting hard foods, e.g., apples
+++ Bleeding on biting soft foods, e.g., sandwiches
++++ Spontaneous bleeding, e.g., blood on pillow on arising

CLINICAL RESULTS

(1) Orally, the most striking objective sign ameliorated by vitamin therapy was gingival bleeding. The therapeutic vitamin supplement was highly efficacious. 24 patients reported gingival bleeding. 19 of them (79%) improved under vitamin therapy. Patients who presented +++ and ++++ bleeding showed the greatest response. This probably indicates a nutritional factor in the etiology of the more severe cases of gingival hemorrhage.

Other objective signs which responded to the vitamin therapy were:

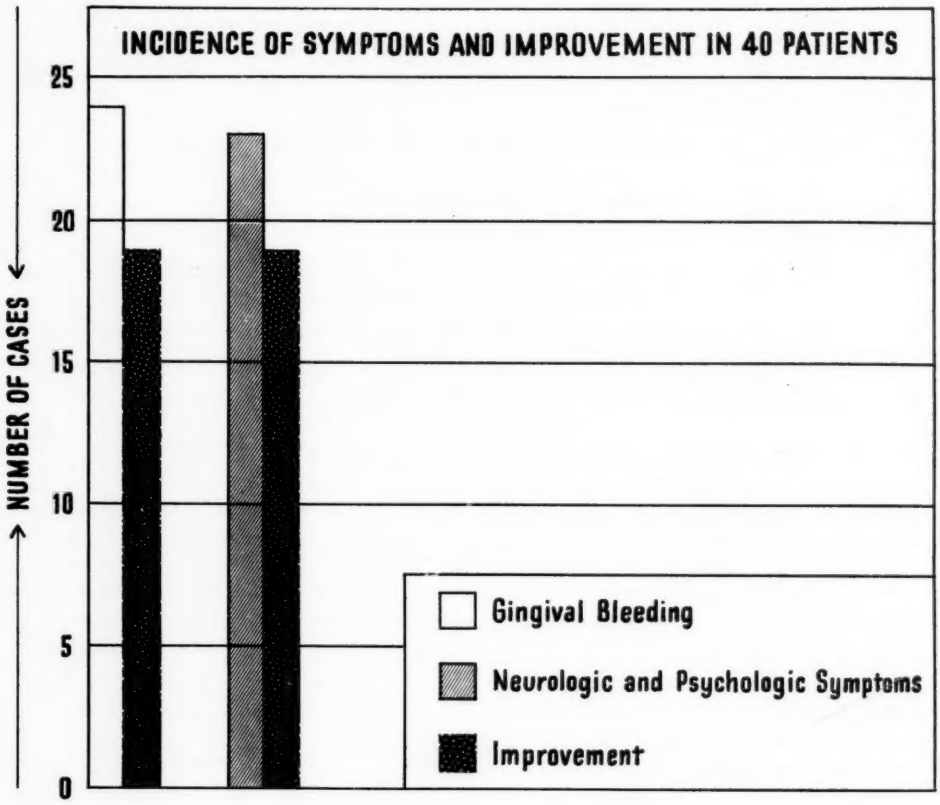
(a) gingival color
(b) gingival tone
(c) gingival enlargement

(2) Systemically, mild psychologic malaise and a tendency to become fatigued easily were common subjective symptoms (23 or 58% of the patients).

(3) The neurologic and psychologic symptoms such as fatigue, irritability, anorexia, sleep impairment, headache, peripheral neuritis (tingling of extremities) improved in 19 of the 23 patients — (83%) with vitamin therapy alone. (Graph I)

(4) The complete vitamin therapy including crystalline vitamins and desiccated whole liver in high dosage achieved best results for both subjective and objective clinical manifestations of nutritional deficiencies.

(5) The patients routinely "felt better" following vitamin therapy, as evidenced by lessened malaise or fatigue.



(6) In those cases for whom vitamin therapy was withdrawn, the original symptoms recurred. Resumption of vitamin therapy proved effective in eradicating the recrudescence.

SUMMARY

(1) This study corroborates the findings in the literature (1, 2, 3, 6) that vitamin therapy is beneficial in cases of marked gingival bleeding.

(2) Therapeutic dosage of a multiple vitamin supplement with a desiccated whole liver adjunct for a period of at least 10 days was found to be the most beneficial and the most practical prescription for those dental patients with oral manifestations of nutritional deficiencies who in addition presented one or more of the following neurogenic signs and symptoms: fatigue, irritability, anorexia, sleep impairment, headache, peripheral neuritis (tingling of extremities).

However, in all such cases, consultation with a skilled internist or psychiatrist is advisable to preclude the possibility of incomplete diagnosis and therapy.

(3) Thus, both a periodontal problem and a neuropsychiatric disturbance may be symptoms of a general systemic disorder. Since in many cases, the disorders may be nutritional in origin

or association, they may respond to vitamin therapy as an adjunct to complete treatment. With vitamin therapy, improvement of the periodontal condition may be expected to the extent that vitamin deficiency is a factor in the cause of the periodontal pathosis.

ACKNOWLEDGMENTS

The authors express their gratitude for the cooperation of Harry D. Kruse, M.D. and Ira S. Wender, B.S., D.D.S. for their help in the preparation of this paper.

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THE EFFECT OF MENTAL STRESS ON THE pH OF THE SALIVA, A PRELIMINARY STUDY*

HERBERT BRICKEN, D.D.S.

INTRODUCTION

For the past ten years interest in psychosomatic dentistry has taken very great strides. New approaches have been planned to make dental treatment more acceptable to the patient. The relationship between dentist and patient has been studied carefully and much progress has been made.

Gradually, the profession is becoming aware that the actual etiology of some oral conditions might be influenced by psychological factors acting in conjunction with other more established causes.

It is proposed in this paper to present a partial review of the literature which treats upon some of these psychological factors, especially those which show that the saliva which bathes the tissues of the mouth itself undergoes both chemical and physical changes under psychic influences. It is the intention of the writer to show that the quality and quantity of the saliva varies in various psychological conditions which are regarded as both normal and abnormal. It is further proposed to investigate by actual experimentation a mental stress encountered in a typical situation which people who are regarded as average, mentally healthy individuals may encounter. The purpose of this is to see if these persons under conditions of stress will show any changes in the chemical composition of their saliva, namely the pH value.

REVIEW OF LITERATURE

The fact that etiological factors in periodontal disease are closely related to emotional factors has been carefully studied and reported by Ewen, Moulton and Thieman.[1] This group observed oral and psychological conditions on 32 cases.

Miller and Firestone[2] have reviewed the psychosomatic interplay in the etiology of periodontal disease.

That certain mental states are reflected in physiologic reactions is shown in common expressions which deal with an interrelation of body and mind. This is a familiar fact to all of us. Campbell[3] points out the following common expressions, "moved to tears", "paralyzed by fear", "sick with fear". He also reviews some of the visceral reactions to fear and anger such as dilated pupils, racing heart, trembling, clenching and dry mouth. He states that these can be produced by a real stimulus or by thought, memory or symbol of a real stimulus. These are established early in childhood and remain automatic habit patterns for life. When these emotions are transient the effect is not of too much concern, but chronic anxieties and tensions arising from lifelong attitudes of defense and aggression lead to structural changes in those tissues through which they are expressed. Campbell[3] also made the observation that experimental evidence has proven that pH, viscosity of saliva and to some extent the mineral constituents may be altered under the influence of fear, rage and tension. No actual evidence was presented.

Landa[4] states that blushing, sweating and diarrhea are all autonomic reactions which can originate from emotional causes. He says that it has been demonstrated that rage, anxiety and hostility produce small hemorrhagic areas in the gastrointestinal mucosa of animals.

That the blood flow to the mouth varies with differences in emotional states has been pointed out by Binger[5] who also associates these states

* Presented as partial requirement for the postgraduate course in Periodontia, New York University, College of Dentistry.

with changes in salivary pH.

Habits such as clenching, grinding during the day, night grinding, dietary idiosyncracies, excessive smoking and other psychological factors which contribute to oral pathology have been set forth by Miller[6] and Goldman[7] and are found in practically every new work which treats upon the etiology of periodontal disease.

Alvarez[8] includes such symptoms as dry mouth, bad breath, coated tongue and bad taste in his excellent text on the neuroses.

To this background of evidence of more general processes which the mouth undergoes under various emotional stimuli, it would be well to add reported evidence that the saliva itself is also affected in a number of ways and that its pH value reflects, either directly or indirectly, some of these psychological stimuli.

Broderick[9] mentions the work of Wilkower and Pilz who obtained saliva from a number of persons in a normal mental state. They then brought these people under the influence of a partly vigilant and partly hypnotized state and thus artificially induced emotions of joy, anxiety and anger with the following results:

First; homogenous emotional stimuli always caused similar changes when repeated with the same person,

Second; homogeneous emotional stimuli caused different changes in different persons,

Third; dissimilar stimuli produced similar changes in different persons.

These changes refer to the salivary pH.

Pavlov[10] has run a classical set of animal experiments on salivation and psychic stimuli and has definitely shown that the quantity of saliva varies with such stimulation.

Finesinger and Sutherland[11] have observed that emotional upset may lead to increased salivation and inhibition of emotion may lead to decreased flow of saliva.

Mellars and Herms[12] show evidence that emotional conflicts of long periods become important factors in causing a chain of somatic reactions which result in pathological changes. Tests of patients with depression and excitement psychoses as well as normal individuals are included in their work. The pH of saliva in the psychotic when depressed fell to more acid levels. Their tests showed that emotionally disturbed people exhibit different balance in alkaline acid relationship than normal people. Their graphs illustrate that salivary pH and bleeding gingiva curves seem more or less to follow with the curve of the emotional status. Spontaneous bleeding occurs with high excitement. Vascular changes in various emotional states are well known.

Rich[13] made a study of the biochemical relationship to personality. He studied two groups of psychology students, 39 undergraduates and 18 graduate students. Their personalities were rated by psychological indices and their saliva and urine tested. The least excitable showed most acid urine and saliva. The most excitable showed more neutrality or alkalinity.

Chavoor[14] states a possibility that chemical change in the buffer state of the saliva may be initiated by changes in the function of the salivary gland through autonomic stimulation. If the secreting alveoli of the salivary glands are not supplied with sufficient blood and oxygen the serous and mucous cells that secrete ptyalin and mucin will not function to their full capacity. Thus the chemical properties of saliva are changed. This change may reflect in the pH or buffering action of the saliva.

Briggs[15] suggests that the calcium content of the saliva is the means of pH control. He feels that mental unrest could cause a retardation in function of the parathyroid gland and thus a drop in salivary calcium by reflection of the lowering of the blood calcium. This would allow the acid content of the saliva to increase. He offers the relative immunity of the calculus covered teeth to caries as a result of this concept.

Further investigation of this concept is offered in the work of Flanders Dunbar[16] who summarizes the work of Glaser. Glaser showed that blood serum calcium is constant in normal individuals. This constancy is not found in nervous individuals. He proved that by suggestive influences in the direction of emotional quieting the calcium content of the blood is lowered. By artificially exciting the patient one

day and quieting her by suggestion on another day a 3.53 mg % variation in the blood serum calcium could be produced.

In this work of Dunbar she also quotes Ehrstrom as concluding from his experiments that psychic conditions which can be characterized as states of calm begin usually with a decrease of blood calcium and periods of restlessness with an increase.

One can see that there are several opinions as to how the salivary pH is affected by emotions and also as to the mechanisms causing this pH change.

Massler[17] cites the example of students and tense middle-aged men who can show a complete breakdown in the dental apparatus in a 6 month period due to erosion or caries which he feels is due to an altered composition of the saliva.

Ryan[18] also states that a change in the chemistry of the saliva brought about by chronic emotional tension might be a cause for caries.

Winsor[19] measured parotid secretory rate during mental activity and found a reduction in output.

Heron[20] states that saliva flow can be reduced in hypnotic states by suggestion. Moss[21] says the same thing and the author has seen this reaction on patients a number of times although the flow was never actually measured during his observations.

Breber and Tarachow[22] report a diminution or arresting of salivary secretion in a woman suffering from anxiety neurosis. When the emotional stimulus was changed she salivated profusely.

Xerostomia is a common manifestation of anxiety. This is stated by Straker[23] who also remarks that ptyalism may be due to emotional disturbances.

Curschmann[24] cites a case of psychogenic xerostomia and classifies xerostomia.

Burstone[25] reviewed the literature on salivary flow and mental states as pointing out the variance of several elements of the saliva with changes in nervous tension.

Starr[26] in 610 specimens collected from 228 healthy subjects showed that when the pH was 6.6 or less the individual looked fatigued or deficient in energy reserve. When the pH was about 7.0 the individual appeared to have more energy He suggested that CO_2 in the blood reflects this change in the saliva. The CO_2 in the blood increases during fatigue.

In the process of the above investigation it was noticed that emotional excitation increased the pH of the saliva on 3 subjects and a fourth was done as a check. Fear and anger were the emotional elicited for these observations. The fourth pH also rose.

The mechanism which Starr believed possibly responsible for this change is that when the individual is excited or in some manner stimulated emotionally the body respires a bit more rapidly (for preparation for fight or flight). CO_2 is blown off and the carbonic acid drops its concentration in the blood which reflects as a carbonic acid drop in the blood buffering system which raises the pH which reflects in the saliva.

Thirty-four determinations on 7 individuals were done correlating salivary pH and CO_2 content of alveolar air. The result showed that the H ion concentration varies directly with the alveolar air CO_2. Therefore the pH varies inversely. When 10 more subjects were told to breathe deeply for 10 minutes the hydrion concentration of their saliva decreased.

Starr proposes that perhaps in people who are in disturbed mental states this hyperventilation takes place and since no fight or flight causes tissue use of the hyperventilated blood, the blood and saliva may remain high in pH for some length of time.

In chronic cases of mental disturbance the bronchioles may be dilated for great lengths of time due to excessive adrenal function. In addition, a chronic hyperventilation may be present due to hypersensitivity of the respiratory centers of the brain. Thus the pH values of saliva and blood may remain chronically high.

Champion[27] says that such minor acid base changes as Starr reports would not reflect in the saliva. He offers experimental evidence.

Broderick[9] questions Champion's work and

says it is possible to change the acid base balance of the body with a long term stress and therefore this will reflect in the saliva. However, he feels that the acid base balance is not affected by the psycho-endocrine balance in any established set pattern.

Strongin and Hinsie[28] have shown that manic depressive patients show a rise in salivary flow to a normal rate during the manic state, a diminution during the depressed state and also a lower pH during the depressed state with a rise in pH during the manic, or excitable state.

Thus the controversy and diversity of opinion is seen to be quite evident.

Before presenting the experimental evidence it is felt that a short anatomical and physiological review of the control of the salivary glands is in order. The salivary glands are controlled by nerves which come from two sources, the bulbar-autonomic (parasympathetic) and the thoraco-lumbar autonomic (sympathetic). These two innervations do not have the same influence on the secretory activity and exert opposite effects on the blood vessels of the glands.

Bard in Macleod's Physiology text[29] states that the parasympathetic nerve, when stimulated, elicits a copious flow in experimental animals. Sympathetic stimulation also produced a flow, but to a much lesser extent than the cranial nerve stimulation.

Function of the salivary glands is entirely under nervous control. Secretion is caused by impulses acting on a nerve center or centers in the medulla oblongata. The impulses acting on these centers may be transmitted along afferent nerves coming from the mouth and nares or may come from higher centers over pathways within the brain. We have all experienced the dry mouth of nervousness or the salivation of appetite upon the sight or smell of food. Classical experiments in biopsychology have proven that a dog's mouth will water when a bell which he has been trained to associate with food is rung, even if no food is present.

Local irritation may cause salivation which can be entirely local in its reflex nerve pattern or act through the salivary centers of the brain.

The salivary glands are liberally supplied with blood vessels and thus metabolic influences are important in the content of the saliva but not in the control of the salivary gland function.

From the review of the literature it can be seen that some sort of change in the saliva, both physical and chemical, can be expected when a person is under mental tension. There appears to be no set concept of exactly what to expect. Opinions vary from a rise in pH to a lowering of pH to a rise in some persons and a lowering in others under the same situation of stress.

It is proposed to investigate the chemical aspect of the situation as reflected by the pH change.

INVESTIGATION

In order to investigate the effects of a mental stress situation which might be considered of a fairly normal-occurring nature, fifty students were chosen at random from the freshman class at New York University, College of Dentistry. No psychological rating was thought necessary as no specific personality-chemical tieup was being sought but rather only a trend in pH relationship was under question. It was felt that all students are under some stress for important examinations. The limitations of this experiment will be discussed later in this paper.

Variables were kept as much to a minimum as possible. All pH determinations were done on a Beckman electric pH meter by the same operator at the same time of day (10-11 AM), which is at least two hours after eating, on students who were not smoking or chewing gum or in any way stimulating a flow of saliva. The pH determinations were done immediately upon collection of the specimens. Any students who were under any exceptional situations of mental stress were not employed, if the subject was honest upon questioning. Any physical illness also excluded the subject. Thus the fifty students were eventually reduced to forty one.

pH determinations were first run two weeks before final examination on a day when no exceptional situations were present in the school activities. This was the first set of normal pH numbers. A first stress study was run on 14 students from whom saliva was collected immedi-

ately after leaving the final examination in Biochemistry. (Table 1.) This gave the first set of pH numbers under stress and constituted a pilot study. Next day forty one determinations were run on the same students who gave original normal samples. This included the 14 students of the first stress study again. These samples were collected during the Dental Anatomy examination. (Table 2.) The entire week was an examination week and the two days chosen were the days of the most difficult examinations according to freshmen opinion. Histology and Gross Anatomy were given on the afternoons of the test days so there was great apprehension of the immediate future as well as the stress of the examination being given. The samples taken during dental anatomy gave a second set of determinations under stress. This time 41 numbers were obtained.

Two weeks later, after a 10 day vacation a second set of normal determinations was taken on a day when once again no exceptional stress was present in the school day. This gave a second set of normal figures.

The variation between the normal pH figures was computed. An average normal pH was determined for each student this being a mean figure between the two normal pH numbers. The variation between this figure and the first stress situation was computed for 14 students. (Table 1.) Then the variation between the mean normal and the second stress pH figure was determined for the 41 students of the second stress situation (Table 2).

TABLE 1

Student No.	Normal pH	Normal variations in pH	pH during stress	Stress variation taken from mean of normals
1	6.79 — 6.80	0.01	6.75	—0.05
2	7.20 — 7.30	0.10	6.90	—0.35
3	7.12 — 6.91	0.21	6.69	—0.33
4	7.60 — 7.59	0.01	7.10	—0.50
5	6.80 — 6.90	0.10	6.50	—0.35
6	7.11 — 6.92	0.19	7.00	—0.02
7	6.71 — 6.68	0.03	6.50	—0.20
8	7.21 — 7.11	0.10	7.15	—0.01
9	6.90 — 6.97	0.07	6.70	—0.24
10	7.20 — 7.00	0.20	6.55	—0.55
11	6.20 — 6.40	0.20	6.35	+0.05
12	6.68 — 6.72	0.04	6.87	+0.17
13	6.75 — 6.75	0.00	6.31	—0.44
14	6.60 — 6.85	0.25	6.40	—0.33

Average normal pH variation for group = ±0.11.
Average —pH variation for group = —0.28. (12 students).
Average +pH variation for group = +0.11. (2 students).

TABLE 1

Pilot study of 14 students showing the stress variation of saliva pH associated with the first examination.

TABLE 2

Student No.	Normal pH	Normal variations in pH	pH during stress	Stress variation taken from mean of normals
1	6.68 — 6.80	0.12	6.31	—0.43
2	6.30 — 6.35	0.05	5.72	—0.61
3	6.79 — 6.80	0.01	6.00	—0.80
4	6.80 — 7.15	0.35	6.36	—0.62
5	6.91 — 6.90	0.01	7.20	+0.29
6	7.20 — 7.30	0.10	7.10	—0.15
7	6.92 — 7.12	0.20	7.45	+0.43
8	6.25 — 6.30	0.05	6.09	—0.19
9	6.60 — 6.71	0.11	7.20	+0.54
10	7.12 — 6.91	0.21	6.62	—0.40
11	7.02 — 7.00	0.02	6.79	—0.22
12	6.77 — 6.70	0.07	6.91	+0.17
13	7.22 — 7.23	0.01	7.10	—0.13
14	6.90 — 6.80	0.10	5.81	—1.04
15	6.80 — 6.93	0.13	6.10	—0.77
16	7.60 — 7.59	0.01	7.31	—0.29
17	7.20 — 6.90	0.30	6.38	—0.67
18	7.00 — 7.00	0.00	6.35	—1.65
19	6.40 — 6.60	0.20	6.41	—0.09
20	7.09 — 7.15	0.06	6.62	—0.50
21	6.80 — 6.90	0.01	6.25	—0.60
22	7.11 — 6.92	0.19	7.90	+0.88
23	6.71 — 6.68	0.03	6.00	—0.70
24	7.21 — 7.11	0.11	6.52	—0.64
25	6.90 — 6.97	0.07	6.65	—0.29
26	7.20 — 7.00	0.20	7.35	+0.25
27	6.20 — 6.40	0.20	7.40	+1.10
28	6.68 — 6.72	0.04	6.95	+0.25
29	5.98 — 6.12	0.14	6.70	+0.65
30	6.92 — 6.82	0.10	6.76	—0.11
31	6.75 — 6.75	0.00	5.97	—0.78
32	7.19 — 7.29	0.10	7.02	—0.22
33	6.95 — 6.85	0.10	7.00	+0.10
34	7.30 — 7.32	0.02	7.05	—0.26
35	6.58 — 6.13	0.45	7.18	+0.82
36	6.81 — 6.90	0.09	6.97	+0.11
37	6.60 — 6.85	0.25	6.52	—0.21
38	6.89 — 7.11	0.22	7.48	+0.48
39	6.80 — 7.00	0.20	6.60	—0.30
40	6.45 — 6.59	0.14	7.10	+0.58
41	7.46 — 7.40	0.06	7.31	—0.12

Average normal pH variation for group = ±0.12.
Average —pH variation for group = —0.40 (27 students).
Average +pH variation for group = +0.48 (14 students).

TABLE 2

Test study of 41 students showing the stress variation for saliva pH associated with the second examination.

A normal curve test for a correlated series was done to check the significance of the figures of table 2 and they were found to be significant to a 5% chance variation which is regarded to be statistically significant.

Standard deviation was calculated as

$$\sqrt{\frac{\Sigma\Delta^2}{N} - M\Delta^2}$$

where: $\Sigma\Delta$=sum of the difference in pH of saliva under stress taken from a mean of normal pH values of each subject.
N =number of subjects studied.
$M\Delta$=average of differences in pH of saliva under stress taken from a mean of normal pH values of each subject.

Three tables were computed, the first being the 14 students of the first stress situation and their normal and stress figures, the second being the 41 students of the second stress situation and their normal and stress numbers. A third table of three students not used in the result is added because of the exceptional result obtained on the day when the second normal was taken. (Table 3.) The pH values of their saliva all rose quite high and all three were observed to be suffering from colds and sore throats.

The average normal variation of the 14 students used in the first stress situation was 0.11.

Twelve pH determinations fell under stress. The average drop in pH computed from the mean normal was —0.28.

Two pH determinations rose under stress. The average rise from the mean normal was +0.11. (Table 1.)

The average normal variation of the 41 students (including the first 14) used in the second situation was 0.12. Twenty seven students showed a lowering of the pH under the second stress situation. The average drop in pH computed from the mean normal was —0.40.

Fourteen students exhibited a rise in their pH under the second stress situation. The average rise being +0.48 variation from the mean normal of these students. (Table 2.)

DISCUSSION

The limitations of this experiment are several but it is felt that a trend in pH changes has been established. The examination may not be sufficient stress to some students. In addition some students may have been under stresses that they did not mention either on the supposedly normal days or perhaps on the examination days. Exactly who is mentally normal is beyond our scope to determine.

However, men in professional school are certainly accepted by the community as having at least average mental stability, as a group. We

TABLE 3

Student No.	Normal pH	pH during stress	pH during cold and sore throat
1	6.41	5.91	7.40
2	6.80	6.90	7.39
3	6.10	5.89	7.15

TABLE 3

Three students found to be suffering from colds and sore throats on day when second normal pH reading was taken.

are dealing with an average and a trend, not specific cases. Once again, freshmen examinations are regarded as rather tense situations.

The physical well-being of the subjects is also open to question. Although breakfast could not be supervised testing was not performed until two hours after eating.

With these limitations in mind the results have indicated that a situation of mental stress produces a change in the pH of the saliva. In some cases it is raised and in others it is lowered. How this may fit into the etiology of dental disease is a very important question. Is the lowering in pH sufficient to influence erosion or aid in carious attacks on the hard structures of the tooth? Is the rise in pH sufficient to influence an increase of calculus precipitation? What are the effects of the pH changes on oral bacteria and soft tissues?

These questions would seem to merit further investigation. More saliva studies are also needed to establish a more definite pH trend if it is possible.

SUMMARY

A partial review of the literature which treats upon some of the psychological factors involved in the etiology of oral conditions has been presented stressing literature which deals with the psychological effect on the nature of the saliva. This background material has illustrated a number of changes which the oral cavity may undergo under psychological stresses. It shows that the saliva is definitely affected by emotional stimuli. The psychic nature of the control of the salivary glands has been pointed out.

Various mental states have been associated with salivary changes but for the most part this has not been tested in every day situations but rather in mental institutions with the exception of Starr's work in which 4 determinations were made under artificial situations of fear and anger. None of the literature showed any determinations in situations which are so common as to cause thought as to whether these salivary changes are of any real significance in the etiology of dental disease in large portions of the population.

Two sets of determinations were done on the pH of saliva of dental students under the emotional tension of final examinations.

The first set showed 12 pH determinations falling and 2 rising.

The second set showed 27 pH determinations falling and 14 rising.

The pH changes under stress were greater than the average variations of the pH of the saliva of the group.

CONCLUSIONS

The pH of saliva seems to show a tendency to rise or fall under emotional stress.

Further study is necessary to attempt to establish more definite trends in pH changes and to

investigate their role, if any, in the etiology of dental disease.

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DO YOU HAVE TROUBLE WITH DENTISTS?*

LEWIS J. BELL, D.D.S.

EDITOR'S NOTE: *This material, presented from the dentist's point of view in a magazine intended for physicians is reprinted for its possible value in helping the dentist answer the physician's question, "How can I cooperate better with a dentist to help our mutual patients?"*

Certain side effects of dental treatment can be unexpectedly painful—for the dentist. Not long ago, a young woman leaned back in my chair, opened her mouth, and said: "I haven't been following the diet you prescribed. My doctor told me not to."

The "diet" was an urgent recommendation that she eat more green vegetables. I couldn't think why anyone should object, except possibly the patient herself. Nor, if her physician *had* objected, could I think why he hadn't let me know his reasons. So I made my "Oh?" as casual as possible, and took my time about selecting a probe.

"I just happened to mention it to him," the lady in the chair went on. "And he said I needn't worry about a special diet as long as my appetite and weight stay normal."

That called for a change of subject. I could see I'd have to persuade her all over again that improved eating habits would mean fewer dental treatments; but not *that* day. I doubted that her confidence in either dentistry or medicine would be increased by what she might interpret as a disagreement between the two professions.

Of course, there was no real disagreement. What had thwarted my dietary plan was just a careless remark tossed off by a busy physician.

I'm convinced, from experience that the fine art of cooperation between physician and dentist has reached a high level. I believe that their mutual patients have been immensely benefited by these good relations. I even maintain that physician-dentist relations are almost as good as they *should* be.

But not quite. Or, at least—as in the story related—not always.

Probably there are fewer *disagreements* between physicians and dentists than between any other two professions. But *misunderstandings* are something else. They crop up where least expected; and sometimes they have serious consequences for dentist, patient, and physician.

What causes them? Mostly, as I see it, the existence of a few specific stumbling blocks.

I teach at a dental school, and my courses are largely concerned with relationships between dentists, physicians, and patients. One of the easiest points for me to demonstrate to students is that every stumbling block between dentists and medical men has two sides—and that the physician's side is the easier to stumble on.

Why? Because the average physician has only occasional contact with dentistry, while the dentist must work with many branches of medicine in nearly every phase of his work.

It goes without saying that you, as a physician, don't *want* to trip over hard-to-see stumbling blocks. But how can you avoid them? Here are a few suggestions:

THOSE CASUAL ANSWERS

1. *Avoid making broad statements that may be misinterpreted by patients.* Often, for instance, a patient who is also receiving dental treatment may ask for your opinion on some feature of it. That's-perfectly all right. But sometimes he puts his questions so disarmingly, and you answer so casually, that he sees implications in your reply that aren't really there.

I doubt that any responsible physician would deliberately tell a patient to ignore his dentist's advice. Even if the physician had good reasons for believing the advice questionable, he'd generally be discreet enough to compare notes first with the dentist.

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But many misunderstandings are generated, I suspect, by the patient. Suppose a person is unhappy about a dentist's diet prescription. Suppose the patient one day asks the physician, "Doctor, is there any good reason why I should stuff myself with green vegetables, which I detest?" Then suppose the physician casually replies that *he* wouldn't say so—that, as a matter of fact, he doesn't like vegetables himself.

The effect is translated thus in the dentist's office: "My doctor doesn't think I should follow the diet you gave me!" And the physician will probably never know that he helped create a minor crisis in dentist-patient relations.

Where did the physician stumble? If he'd given the question an instant's thought, my guess is that he'd have wanted to know what brought it up. Having found out, I'm sure he'd have worded his answer more diplomatically.

WHEN PATIENTS RETURN

2. *At least give careful consideration to the dentist's tentative diagnosis when he refers a patient back to you for further medical examination.* Does that sound obvious? That's what *I'd* have said—before some events like the following became known to me:

A dentist, interviewing a new patient about his general physical condition, found reason to suspect a heart ailment. He telephoned the man's physician, who was unimpressed—since he'd examined the patient a few months earlier and found nothing wrong. But he promised to look into the matter.

The physician apparently did make some sort of examination. At the end, he assured the patient that he was as sound as any man of his age could expect to be. And he added a few words to the effect that any dentist who ventures beyond the oral cavity is automatically suspect.

The immediate result was rough on the dentist. Though he didn't lose his patient, he had lost a good share of the man's respect and confidence.

But what happened next was even rougher on the patient: he suffered a heart attack.

An extreme example? Perhaps—but not so far-fetched as you might think.

Sometimes a physician rejects a dentist's diagnosis merely through personal pride; he believes *he'd* have been the first to spot a patient's disorder, if any existed. He may rely on the findings of an examination made many months before. Or he may simply feel that opinions not originating with other physicians aren't worth considering.

The men who have these attitudes usually aren't aware of them or of the harm they can do. Such men know, of course, that today's dentist has had enough medical training to make good use of the diagnostic tools in his possession. And these physicians know—or should know—that the reputable dentist doesn't practice beyond his specialty.

WHAT DENTISTS WANT

3. *Be willing to share your case history with the dentist and to consult with him when he requests it.* Presumably, like most physicians, you make a point of cooperating in this respect. But some men don't.

The physician who fails to cooperate usually belongs to the old school. His opinion of dentistry dates from the time when the tooth-puller relied on brawn rather than brain. But when finally prevailed upon to discuss a patient's treatment with an up-to-date dentist, he's apt to change his mind.

He soon admits that medical guidance is often essential to good dental work. Few modern dentists will undertake extensive treatment without it if the patient has major systemic ailments.

A physician's advice may be needed when questions about anesthesia or sedation arise. When soft foods prescribed for ulcer patients interfere with the control of oral disease, dentist and physician may have to work out a compromise diet. Certain medications damage diseased teeth and gingiva, and the dentist needs the physician's help to offset their bad effects.

FLAT RECOMMENDATION

4. *Beware of specifying dental procedures that the dentist may find inadvisable.* This is another stumbling block that trips the old-

school medical man more often than his younger colleague. What happens is something like this:

The physician, tracking down the source of a low-grade infection, suspects a tooth that obviously has seen better days. So he sends the patient to the dentist with instructions to have the tooth pulled.

The dentist may concur in the physician's opinion, of course. On the other hand, he may find the tooth innocent of mischief. So *he* recommends leaving it alone.

At this point, practically anything can happen. Patient and physician may gladly accept the dentist's opinion. Or the patient, having more confidence in the physician's verdict, may think less of the dentist for disputing it. Or—and this is the great danger—the physician may insist on standing by his diagnosis.

I've heard of physicians who have said to dentists in such situations: "If *you* won't extract the tooth, I'll send my patient to a dentist who will." Every so often, that's exactly what happens—with nobody better off in the long run.

It's the dentist's business to know his specialty better than anyone else. If the physician doesn't feel this is true of a particular dentist, let him choose another in whom he has more confidence and then make his referral with no strings attached.

WHEN ECONOMY COUNTS

5. *Don't advise patients to postpone needed dental care because of the possible financial burden.* Some physicians have done this when patients of modest means already face large medical bills. The excuse is that not many dental disorders (apart from a raging toothache) are considered real emergencies.

Yet the patient may be ill advised without a word from the dentist. While the cost of certain procedures often poses a problem, solutions have been worked out by dentists in a wide variety of cases.

It's true that some people can't afford all the services they should have at one time, even with dental budget plans. But there's another alternative that shouldn't be overlooked—namely low-cost protective care, which can make the waiting period safer.

Physician and patient may both be agreeably surprised at what can be accomplished without an extravagant outlay. The physician who's aware of this fact and advises accordingly will not merely help his patient; he'll help improve physician-dentist relations, too.

A GUIDE FOR TONGUE TRAINING

SAUL T. ASNIS, Ph.G., Ph.C., B.S., D.D.S.

INTRODUCTION

The oral myodynamics of the lip, cheek and tongue musculature are of importance to the general practitioner of dentistry as well as to the specialist in periodontics, orthodontics, prosthodontics, oral surgery and phonetics.[1] It is recognized that abnormal tongue force contributes to various oral disturbances.[5, 6, 10, 14, 15] The periodontist must contend with tongue habits which cause flared, migrated and non-occluding teeth.[8, 11] Orthodontic texts list abnormal tongue function as a cause of malocclusion and of subsequent relapse if this force remains uncorrected.[3, 4, 12] The prosthodontist is concerned with the action of the tongue in the successful construction of dentures.[13] The oral surgeon must regard the pressure on the repair tissue in cleft palate cases.[2] In the correction of speech defects the position of the tongue is important in phonetics.[7] This paper will concern itself specifically with the abnormal position of the tongue in swallowing as a cause of migration of the anterior teeth and of open bite.

Miller states that in improper swallowing the tongue is pushed upward on the palate and then thrust forward against or between the anterior teeth, which may cause migration or an open bite. Such patients generally have some degree of hypoesthesia of the soft palate and therefore cannot feel the food bolus in this area, necessitating the extra tongue pressure to force the food posteriorly.[9] Other patients may have started to swallow incorrectly during the nursing period, at which time a nipple which was too long and too easy flowing was used, allowing for little sucking pressure. These individuals never learned how to raise the posterior part of the tongue.[16]

METHODS OF CORRECTION

Various methods are offered to correct this tongue thrust, of which the following are most popular:

1. The patient is trained to place the tip of the tongue on the rugae of the palate and then to swallow.[9, 12]
2. The patient is instructed to place the tip of the tongue against the lingual mucous membrane of the anterior portion of the mandibular alveolus.[10]
3. It has been suggested that a hard candy be placed on the posterior part of the tongue and held up against the posterior border of the hard palate.[16]
4. Many types of punishing barbed devices, interfering appliances and guards have been used so the tongue will be pricked in malfunction or trapped and held in position.[5, 14, 15]

The first three procedures are verbal instructions to the patient, with some means of visual demonstration. The patient reaction is usually good during the first week, but the instructions are gradually forgotten. Further, no definite constant location is possible for the tongue. The fourth method may prove harmful, and is frowned upon by psychiatrists and pediatricians alike. In brief, we are limited by verbal instruction, poor patient cooperation, and the likelihood of physical or emotional trauma.

The author feels that a non-traumagenic, physical reminder with a definite location for the tongue is a simple and quick means of breaking the tongue-thrusting habit. An appliance has been devised to act as a guide in the training of the tongue to assume a new, proper position in swallowing.

CONSTRUCTION OF APPLIANCE

The upper impression is poured in stone. A thin layer of wax is flowed over the rugae and post dam areas. The entire palate is then cov-

ered with one thickness of base plate wax, to the necks of all the teeth. A sleeve is then constructed of one thickness of base plate wax to conform with the curvature of the palate anteroposteriorly. (Fig. 1.) This is processed in clear acrylic or cast in vitallium. Two half-arm clasps are recommended to aid in retention. (Fig. 2.)

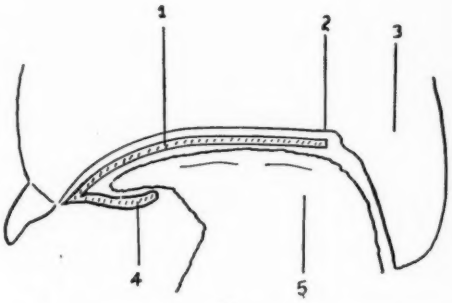

Fig. 1—Diagrammatic anteroposterior section showing the tip of the tongue in sleeve; 1, acrylic base material; 2, post dam area; 3, soft palate; 4, acrylic sleeve; 5, tongue.

NOTE: The waxed-up case is invested in the lower half of the flask with plaster. However the counter half of the flask should be poured with an investment of low setting expansion. This is necessary to facilitate the removal of the case after processing, and to prevent the fracture of the sleeve.

With this guide in position, the patient is asked to place the tip of the tongue into the sleeve and to feel the extent of the forward excursion of the tongue. Adjustments are made at this time to allow for adequate tongue room, and to make certain that there is no interference with the occlusion. The patient is instructed to swallow water, placing the tip of the tongue into the sleeve before each swallow. This practice is repeated three times a day or more if necessary, performing at least twenty swallowing movements each time.

The purpose of this appliance is to act as a definite guide to aid in the training of the tongue to a position where it will not continue to emphasize the open bite or other abnormalities. This physical reminder and the repeated correct positioning of the tongue in swallowing will hasten the breaking of the tongue-thrusting habit.

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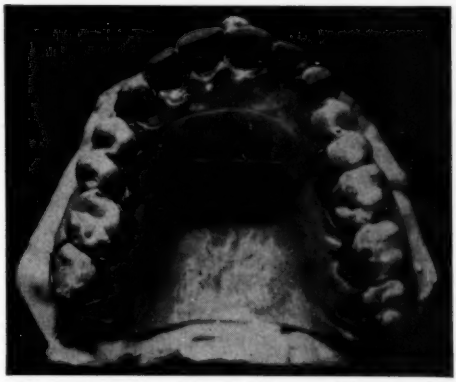

Fig. 2—Finished tongue training appliance in clear acrylic on stone model.

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Answers to Timely Questions

Question: Does a prolific smoker (one patient smokes two packs a day, another five cigars a day) expose himself to leukoplakia? Is leukoplakia a precursor to cancer? What are the latest facts relating smoking to oral cancer?

F. K., Cleveland, Ohio

ANSWER.—Leukoplakia (Greek for "white patch") is actually a thickening of the mucous membranes resembling a callous or roughening of the skin. It is due to one or a combination of many forms of chronic irritation, and occurs most often in the mouth, but it can also occur in other mucous membrane surfaces. Smoking is one of the most common forms of chronic irritation to the mucous membrane lining of the mouth, and therefore is one of the contributory causes to the development of leukoplakia, especially in those who smoke as much as two packs of cigarettes or five or six cigars a day. When the condition occurs in a mild form, it is of little significance as regards health, but in aggravated forms it is often the precursor of cancer, mainly because both leukoplakia and cancer so often follow chronic irritation. The main significance of leukoplakia, therefore, is that it is proof that chronic irritation has been present.

There is definite evidence that smoking (as a form of chronic irritation) is one of the inciting causes of cancer of the mouth, larynx and lungs, especially among heavy smokers. Cancer in these sites can also occur among non-smokers.

HAYES MARTIN

Question: "What clinical values can be derived from routine physical check-ups and laboratory aids as regards the diagnosis and treatment of periodontitis and periodontosis?"

F.K.L., New York

ANSWER.—Although periodontitis and periodontosis are often considered as fundamentally different in their inception, still as clinical entities they may be treated as similar in estimating the usefulness of laboratory aids and routine physical examination in their treatment. It is most important to recognize clinical reality with respect to the two diseases and to that end must bear in mind that of a given 100 patients with periodontal disease (excluding neoplasia, hormonal, and drug influences) approximately 96 will have typical uncomplicated periodontitis and 4 so-called periodontosis. Thus the clinical significance of the two diseases becomes apparent.

Periodontitis and periodontosis may both occur in clinically healthy patients as well as in those having another independent disease such as tuberculosis. However, patients with active tuberculosis, diabetes, syphilis etc. are not commonly encountered in everyday practice and even so there are many instances in which their periodontal disease may be only slightly influenced by their secondary disease.

Therefore, in answer to this question regarding *"routine* physical examination and laboratory tests" it must be borne in mind that under such circumstances one deals largely with clinically healthy patients.

It has been often demonstrated and is completely understandable that patients with chronic inflammation of the periodontium (periodontitis) do not demonstrate any unusual values to any known laboratory tests, nor do they reveal, except coincidentally, physical findings having relation to their periodontitis.

From a practical clinical point of view it may be said, therefore, that clinical values of therapeutic significance cannot, except in rare instance, be secured from routine physical examination or laboratory tests in patients with periodontitis or periodontosis. These diseases in question are still best treated by local instrumentation and cooperation by the patient.

JOSEPH L. BERNIER

Question: What is the role of surgery in periodontal treatment?

K. D., Cleveland, Ohio

ANSWER.—The role of surgery as now used by many periodontists is of great value. It is, moreover, indispensable in the management of most of the advanced phases of periodontal disease.

In order to provide dependable service in periodontia, we must consider the objective in the treatment of periodontally involved teeth, arrive at a correct diagnosis and prognosis, then select the technic best suited for the treatment of the individual case.

The purpose of treatment is to eradicate the causes of the disease, then restore the supporting structures of the teeth to a state of health and teach the patient a home care technic that will enable one who is cooperative to retain the teeth throughout the life time.

Subgingvival curettage and gingivectomy are the only techniques that can be relied upon with encouraging hope of success. In the management of the disease, it is obvious that it would be advantageous to

choose a technic that offers the best potentialities for success. Mistaken judgment in the choice of technics is sometimes equivalent to the difference between success and failure.

In the early developing phases of periodontoclasia, subgingival curettage is indicated and may be used with the assurance of success. However, in the treatment of periodontal lesions where the lining membrane of the gingival sulcus has been resorbed, and there is evidence of disintegrated portions of alveolar bone support, the gingivectomy technic is indicated.

The principal role of surgery in periodontal treatment is to remove the obstruction to the field of operation afforded by the wall of the periodontal pockets. Moreover, it provides a method for obtaining visibility and accessibility to the deposits and granulations to be removed. It avoids placing sole reliance upon the tactile sensation for locating the calculus and other irritants, enabling the operator to visualize the area. The surgical technic in no way minimizes the necessary emphasis upon careful scaling and root planing. It can be relied upon and used because the importance of these proceedures is recognized in an attempt to attain thoroughness by providing the benefits of visibility and accessibility.

The above conclusions were not arrived at by conjecture or theory, but instead, they are based upon thirty-seven years experience in the surgical management of periodontal problems.

OLIN KIRKLAND

Question: Of what value are antibiotics in the treatment of suppurating pockets?

H. B., Baltimore, Md.

ANSWER.—It is taken for granted that you are referring strictly to periodontal, pockets, and not including parietal abscess under this heading. The next thought is the etiologic factor involved. We all know that there are many of these factors which can cause a suppurating pocket. In most instances these factors are of a local variety. My answer therefore is pointed to this type of condition.

In the past it has been possible to stop suppuration thru the elimination of the local factor plus thorough and complete curettement of the pocket.

Since the advent of the antibiotics I have at times used these with the above mentioned procedure. In some instances they appeared clinically to retard healing, and therefore may be considered only as an aid if used.

I have also tried on several occasions to use antibiotics locally without instrumentation and in my hands they have failed.

The antibiotics used were penicillin, aureomycin, and terramycin. They were used either as a crushed tablet or a paste and introduced to the full depth of the pocket.

The following therefore is my own observation. I still prefer to treat suppurating pockets strictly with instrumentation. At times I may use an antibiotic as only an aid. The antibiotics above applied locally leave much to be desired unless all factors are eliminated and adequate curettement is done. Penicillin works better in my hands than any of the other antibiotics.

JACOBY T. ROTHNER

Medical Views on Oral Problems

"STILBAMIDINE" IN THE TREATMENT OF CUTANEOUS BLASTOMYCOSIS*

REPORT OF A CASE

Major Joel C. Fink, Capt. Darl E. VanderPloeg
and
Lieut. Col. Myles P. Moursund (MC), U. S. Army

SUMMARY

"Stilbamidine," an aromatic diamidine of the stilbene group, has been used in the treatment of a patient with cutaneous North American blastomycocis. Older forms of treatment including roentgen ray therapy, iodides, and blastomycin hyposensitization were only partially effective in clearing some of the lesions present in this case and totally ineffective in controlling other lesions. Following the first course of 1.8 gm. of "stilbamidine" an estimated 50 to 60% involution of lesions occurred. No immediate toxic reactions were noted. After a rest period of 44 days a second course of 1.95 gm. of "stilbamidine" was given. Complete involution of the lesions occurred after a total dosage of 3.75 gm. of "stilbamidine." There has been no recurrence of the lesions three months after the completion of therapy.

A mild trigeminal neuropathy consisting of numbness and formication over the forehead, nose, malar areas, and upper lip was first noted one month following the last course of treatment. This neuropathy was considered to be a toxic manifestation of the "stilbamidine" therapy. However, it is felt that trigeminal neuropathy is not a serious enough complication to be considered a contraindication to the use of "stilbamidine" in view of the excellent clinical response shown in this case of recalcitrant cutaneous blastomycosis. It is felt that "stilbamidine" is a promising agent for the treatment of cutaneous North American blastomycosis and warrants further clinical trial.

* Case Report, J.A.M.A., April 18, 1953, p. 1397.

TREATMENT OF NOSEBLEED*

Beinfield applies the term nosebleed to spontaneous bleeding from a specific anatomical location in the nose. He excludes from this discussion diffuse nasal hemorrhage associated with systemic diseases, surgical operation, or trauma. Anterior nosebleed is most frequently due to an ulceration or a rupture of a blood vessel in Little's area or Kiesselbach's triangle, and occurs oftenest in children. Posterior nosebleed, or postnasal bleeding, results from rupture of the sphenopalatine artery. It occurs in older persons with hypertension, arteriosclerosis, or cardiovascular disease. In the mild type of anterior nosebleed, a pledget of cotton moistened with tetracaine hydrochloride is placed in the nose and left in place for a few minutes to produce anesthesia. If bleeding is still present on removal of the cotton pledget, it is replaced by another one that has been moistened with a 1:1,000 epinephrine solution. However, before this second pledget is inserted, the physician should look into the nose to ascertain the bleeding spot. With the bleeding controlled by the epinephrine, a chromic acid bead, made by fusing a chromic acid crystal on a heated wire applicator, is applied, but only to a dry surface. In emergencies in which blood is pouring from the nose and the bleeding point cannot be searched for, the nose is packed under direct vision and the packing is retained for 24 hours or longer. Curetting the bleeding area down to the septal cartilage with a mastoid curette is beneficial if the bleeding is coming from the bone, e. g., the vomer. Posterior nosebleed usually causes apprehension. Elderly patients should be reassured by being told that the nasal hemorrhage is not nearly as serious as if it had occurred in the head and that a certain amount of blood loss is good because it helps to lower the blood pressure. The nose should first be anesthetized, especially high up on the septum and posteriorly. A piece of gauze moistened with epinephrine is placed between the septum and the middle turbinate and pushed back until the resistance of the anterior wall of the sphenoid is felt; then the gauze is firmly pressed against it. This gauze pack acts as a pressure pack over the ruptured vessel, and usually checks bleeding. When there is a high deviation of the septum, with no room between the septum and the middle turbinate, 5 to 10 cc. of a 1.5% solution of butethamine hydrochloride with epinephrine 1:30,000 is injected into the septal mucosa. With infiltration and elevation of the mucoperiosteum, the bleeding frequently stops but may recur after the infiltration disappears. When the bleeding is very profuse and when it is impossible to put a gauze pack against the anterior wall of the sphenoid, a postnasal pack must be applied immediately. If bleeding continues after 24 hours with the postnasal pack still in place, a submucous resection should be done. It is difficult to understand why a submucous resection should control postnasal bleeding, but it does in the majority of cases. With the plan outlined for postnasal hemorrhage, the necessity for ligation of the external carotid artery will be greatly reduced or eliminated.

* Reprinted from A.M.A. Arch. Otolaryngology by J.A.M.A., April 11, 1953, p. 1371.

SENSITIVITY TO COMPOUND G-4 ("DICHLOROPHENE") IN DENTIFRICES*

To the Editor:—In the March 21, 1953, issue of THE JOURNAL, page 998, there is a report by A. A. Fisher and Louis Tobin of four cases of allergic dermatitis and cheilitis due to G-4, dihydroxydichlordiphenylmethane. During World War II we performed "prophetic patch tests" with this compound, which was being considered for use as an antimildew in fabrics to be used by our armed forces. The percentages in the fabrics was 0.45% of weight of fabric. A total of 232 subjects were patch tested, and eight reactions were obtained. As a result its use was disapproved by the U. S. Army Industrial Hygiene Unit. The hexachlorophene compound G-11 was found to be safe for such use. Schwartz, Tulipan, and Peck (Occupational Diseases of the Skin, Philadelphia, Lea & Febiger, 1947, p. 298) list dihydroxydichlordiphenylmethane as a skin irritant in concentrations as low as 0.45%. These facts show that G-4 is not suitable for dentifrices, cosmetics, and wearing apparel and again prove the value of the "prophetic patch test."

LOUIS SCHWARTZ, M.D.
915 19th St., N.W.
Washington 6, D.C.

* Correspondence, J.A.M.A., April 18, 1953, p. 1431.

TREATMENT OF GRANULOMA PYOGENICUM*

The author reports the cure of a large granuloma pyogenicum following the injection into the base of the lesion of 300,000 units of sodium penicillin and 0.5 cc. of a 5% procaine (novocaine®) solution in 1 cc. of distilled water. The lesion was a hemispherical tumor appearing on the cheek of a 50-year-old woman and growing within four months to a diameter of 3 cm. Clinically it had features of both granuloma pyogenicum and epithelioma, but its disappearance within two weeks after the penicillin injection ruled out the latter diagnosis. A superficial erosion remained after the tumor disappeared, but this was cleared up within a few days with an ointment containing ichthyol and yellow oxide of mercury. There has been no recurrence in six months. The treatment is painless, does not produce local complications, is followed by rapid cure, and does not produce scars.

* Reprinted from Rev. Asociación Medica Argentina, Buenos Aires, by J.A.M.A., April 18, 1953, p. 1456.

REMOVAL OF WISDOM TEETH*

TO THE EDITOR:—*A boy, 15 years of age, has had orthodontic treatment for the last five years with good results; one tooth, however, seems to be slightly out of line. One orthodontist, after making roentgenograms of the patient's wisdom teeth, advised that the wisdom teeth, which have not erupted and are not coming in straight, be extracted so the rest of the teeth will have more room. Another orthodontist disagrees and does not advise extraction of the wisdom teeth. What is your opinion?*

M.D., Florida.

ANSWER.—The question of whether or not the third molars or wisdom teeth are the cause of relapse following orthodontic treatment has been debated for many years. Evidence seems to point to their innocence. The observation is often made that the irregularity of the lower front teeth develops regardless of whether the wisdom teeth are present, and it seems to appear at about the time that these teeth would be expected to erupt. The two phenomena occurring together makes them appear to have a cause and effect relation. The decision as to whether the third molar should be removed should be made on the basis of the roentgenograms of these teeth. If they are standing at such an angulation that there is no chance for their eruption and if the patient has reached the age of 17 or 18 it is sometimes wise to have them removed to avoid possible damage to the second molars immediately in front of them.

* Queries and Minor Notes, J.A.M.A., May 9, 1953, p. 198.

SURGICAL TREATMENT OF CANCER OF THE TONGUE*

Cancer of the tongue, which was first a surgical problem and then an irradiation problem, is now becoming a surgical problem again. The results of surgical treatment, while far from ideal are superior to the results of irradiation therapy, particularly with respect to cervical lymph nodes. Carcinomas of the posterior third of the tongue, however, are frequently of a highly undifferentiated type and respond better to competent irradiation than surgery. In theory, every carcinoma of the tongue should be widely excised, and a bilateral complete excision of the upper and lower cervical lymph nodes should be carried out to offer the patient his best chance of survival. In practice these procedures involve at least three major operations. In most clinics an attempt is made in the individual case to fit the operation to the extent of the disease. In some cases, excision of the primary lesion is combined with homolateral upper neck dissection alone; in others a bilateral upper neck dissection is done; in a third group a complete neck dissection is done on the side of the lesion and an upper neck dissection on the opposite side. Complete bilateral neck dissection is done in relatively few cases. The technique of removing the primary growth as well as that of the excision of the cervical lymph nodes is presented in detail. With respect to the primary tumor, it is obvious from collected reports that in approxi-

mately half the cases that appear for treatment there is failure completely to excise or destroy the lingual cancer. The five year survival rate in patients without cervical metastasis does not, as a rule, exceed 50%. In general, the five year arrests in patients without cervical lymph node metastasis have been approximately 45%. In patients with proved cervical lymph node metastasis the five year arrests have been approximately 15%. The five year survival rate in patients with bilateral cervical metastasis has not been determined, but undoubtedly it is low.

* Reprinted from New York State Journal of Medicine by J.A.M.A., May 9, 1953, p. 189.

RESEARCH ON DENTAL CARIES*

With some 1,000 beds for patients with mental deficiencies and other pathological conditions, Vipeholm Hospital in Lund has, in only a few years, become a center for the study of the diseases of the teeth and has gained a reputation of international importance. The history of this investigation begins with a request by the Swedish government to the Swedish Ministry of Health, in cooperation with the Swedish Dentists' Institute, to study means for combating dental disease in the country. Surveys of school children have shown that the dental caries rate in childhood is very high in Sweden, with, in some instances, a mean of more than seven new outbreaks of caries per child per year. In some cases this mean has been as high as 20 to 24 attacks per child per year. After the necessary quarters had been provided for a long-term investigation of dental disease at Vipeholm Hospital, about two-thirds of its patients were selected by certain dental and medical standards to serve as test objects. Periodic examinations of these patients' teeth were carried out, and from 1945 various problems were studied with special reference to caries. In 1946 and 1947 much attention was paid to the possible connections between caries and vitamins and minerals. The administration of lime, fluorine, and bone meal to the diet failed to show that these products had the capacity to prevent caries. But no final conclusions were drawn, since the duration of these tests was comparatively short. From 1947 to 1949 many different tests were carried out with regard to the influence of carbohydrates, sugar in particular, on caries. Between 1949 and 1951 various changes were made in these tests. While some groups of patients lived on a standard diet without any carbohydrates between meals, other groups were given sugar in many different ways between meals.

Since this investigation was started, numerous preliminary reports have been issued in Swedish and English. A more comprehensive publication is due shortly on the relationship of dental caries to the consumption of sugar in various forms. The first section of this publication has already appeared in the organ of the Swedish Dental Association (*Sveriges tandläkareförbunds tidning*) for Feb. 1, 1953. Its author, Docent Bengt Gustafsson, points out that the risk of caries is greatest when sugar is given between meals in such a form that it tends to stick to the surface of the teeth in a concentration maintained for a considerable time. Thus, sugar in the form of toffee is more dangerous than sugar in chocolate.

* Foreign Letters, Sweden, J.A.M.A., May 16, 1953, p. 264.

Book Reviews

Clinical Periodontology. By Irving Glickman, B.S., D.M.D., F.A.C.D., Professor of Oral Pathology and Periodontology and Director of the Division of Graduate and Postgraduate Studies, Tufts College Dental School. One Thousand and Nineteen pages, seven hundred forty-two figures. Philadelphia and London: W. B. Saunders Co., 1953. Price $15.00.

This is a good reference for practitioners who are interested in periodontal disease. There is much material contained in the more than one thousand pages of the text.

For practical purposes the book has been divided into three phases, the normal periodontal tissues, periodontal disease and treatment. Each of these sections is treated fully and clearly and in an interesting manner.

The contents of the book can best be described by a quote from the author's preface that the book was designed to explain,

"The application of basic principles of periodontology in the prevention, diagnosis and treatment of periodontal disease."

There is some material on the relationship of periodontal disease with other fields of dentistry. Each chapter is enhanced by numerous references.

The mechanics of the book are good. There is bold print on coated paper which makes for easy reading. The illustrations and reproductions are well done.

This is a worthwhile text for the dentist's and physician's library.

LOUIS R. BURMAN

Complete Denture Prosthesis. By Rudolph O. Schlosser, D.D.S., F.A.C.D., Professor, Emeritus, Northwestern University School of Dentistry, Chicago; and Daniel H. Gehl, D.D.S., Professor of Denture Prosthesis, Marquette University School of Dentistry, Milwaukee. Third Edition. Five hundred eleven pages with two hundred ninety two figures. Philadelphia and London: W. B. Saunders Co., 1953. Price $8.50.

A detailed technique is given for the construction of complete dentures, starting from the diagnosis of the case to the insertion, adjustment and maintenance of the completed case. Each step in the procedure is explained and the sequence is maintained throughout. Numerous illustrations help in the telling of the story and the text is quite clear.

Revisions have been made from the second edition and these include the material on final impressions, centric and other relations of the jaws, selection and arrangement of the teeth, and technical advances in the processing of acrylics. The material on immediate dentures has also been changed.

An interesting section has been added showing some unusual cases and their correction by the use of complete dentures.

The text is well written, there are numerous references and a list of suggested books for reading.

This book can be a useful addition to the dentist's library on complete denture prosthesis and may be of use to add to the teaching of undergraduate students.

LOUIS R. BURMAN

Outline of Internal Medicine. Edited by C. J. Watson, M.D., published by Wm. C. Brown Company, Dubuque, Iowa, 1952. $13.00.

This comprehensive outline is an excellent compilation of current information for students of medicine. The method of condensation allows greater opportunity for clinical observation of patients with more direct application of basic knowledge. Each chapter is crystallized for factual content and freed from controversy. Every aspect of medicine is covered even to the handling of emotional problems. There is also a chapter on clinical chemistry and microscopy. The outline form is most satisfactory for the student but difficult for the practitioner, except for quick reference. The only defect is the absence of an index.

I. NEWTON KUGELMASS

Progress in Clinical Medicine. Edited by Raymond Daley, M.D., and Henry Miller, M.D., published by J. & J. Churchill, Ltd., London, 1952. $6.50.

This volume is limited to the advances destined to be of permanent clinical value. The author explains the contributions to industrial medicine, mental disorders, cerebral and geographic, electrolite and water balance, cortisone and ACTH, hyperspleenism, toxoplasmosis and the newer antibiotics. The subject matter is evaluated from the standpoint of underlying principles and the newer applications in everyday practice. Emphasis is placed upon the methods of procedure, tolerance and toxicology of the newer therapeutic agents. The chapter devoted to the future of psychiatric medicine represents a phase in the integration of psychiatry into the fabric of general medicine. The term itself with its implied dichotomy will probably be discarded as this integration becomes more complete. When the emotional aspect of disease is given adequate consideration in clinical practice and when psychiatric assessment becomes routine in the

study of an obscure medical problem, it will be superfluous, for all medicine will then be psychiatric.

I. NEWTON KUGELMASS

Pediatrics in General Practice. By James G. Hughes, M.D., published by McGraw-Hill Book Company, 1952. $14.00.

This book attempts to simplify pediatrics in everyday practice. The principle applications and advances have all been condensed to enable the general practitioner to find ready access to that knowledge since 75 per cent of the medical care afforded children of the nation is by the general practitioner. The book discusses the newborn infant, nutrition, immunization, all systems of the body and the psychological aspects of childhood. All aspects of disease are condensed for easy applicability to the particular problem. In parts of the book there is an oversimplication and an incompleteness that makes the subject matter inadequate for practicability. For example, the hemorrhagic, allergic and emotional problems are given but cursory consideration. Nevertheless, the book is a valuable condensation of pediatric knowledge. Each chapter is followed by an up-to-date bibliography.

I. NEWTON KUGELMASS

Clinical Allergy. By French K. Hansel, M.D., published by the C. V. Mosby Company, 1953. Price $17.50.

This complete text of general allergy embraces all aspects of the field from the standpoint of each specialty. Each problem of the allergic patient, young and old, is treated in such a way that the local reactions may be avoided when various allergenic agents are injected. All methods of treatment of specific diseases are simplified to enable the general practitioner to care for the most complex allergic disorder. With the introduction of antibiotics, aerosols, ACTH and cortisone symptomatic treatment of allergy is effective, yet simple. The author advanced the problem of desensitization on the basis of optimal dosage in the management of skin allergies. The text is a veritable encyclopedia of allergy in everyday practice. Each chapter is followed by a complete source of references. There is a glossary of common terms to clarify the highly specialized terminology employed in the language of allergy. There is an extensive chapter on the preparation of extracts, their adaptation to the individual patient and the methods of immunization. Every systemic disorder directly or indirectly related to allergy is adequately described in this comprehensive volume.

I. NEWTON KUGELMASS

Practice of Psychiatry. By William S. Sedler, M.D., published by the C. V. Mosby Company, 1953. Price $15.00.

This volume embodies all aspects of modern psychiatry. A new section deals with attitudinal pathoses, presenting pre-neurotic disorders. There is an extensive chapter on psychosomatic medicine. The whole question of temperament is broadly discussed from the views of Sheldon, Jung and others. The author looks upon the practice of psychiatry as the practice of "personology," stressing the individual as a whole rather than any one aspect of mind or body. All problems of personality are evaluated—maladjustment, pathoses, neuroses and psychoses for application to everyday practice. Each chapter presents the psychological basis for clinical entities, their ramifications in daily life and practical methods of treatment.

I. NEWTON KUGELMASS

RETIRING PRESIDENT'S MESSAGE*

HAROLD R. GELHAAR, D.D.S.

Our Academy is continuing in its growth and is becoming more and more an organization held in high esteem and regard within our own profession of dentistry, and that of medicine. From its inception, the ideals of this Academy have been nurtured carefully and its affairs administered by men eager to serve only for the best interest of our organization.

The official publication of the Academy, The Journal of Dental Medicine, throughout the years has been expanded into a form of which we justifiably can be proud. All connected with its publication and its business management deserve our hearty thanks and best wishes for its continuing development into a periodical of importance.

Our mid-winter meeting in New York was an outstanding success, with the attendance the largest ever, and our essayists were most engaging. Our most hearty thanks to those on this committee, all of whom who worked so diligently.

The financial aspect of the Academy is a healthy one. Our current operating account is adequate, and our reserves are well invested.

Our present membership totals 481. A list has been published of the names of men seeking membership, which list you are asked to elect today. These men occupy and enjoy important positions in our profession, both at home and abroad. When these men are elected, our total membership will be 537. From the original thirteen founders, you can see how we have grown in a comparatively few years.

Additional inserts have been prepared to bring our Directory up to date. Changes are bound to occur as the years pass by, and it is the intention of your Board of Trustees to keep you fully informed. This ready reference should serve a very useful purpose.

There continues the need for occasional revision of our Constitution. Certain clarification becomes necessary, and rules of order permitting a smoother operation of Academy affairs may require consideration from time to time. In presenting these changes at this meeting your earnest consideration is requested.

The Graduate Award Committee functions admirably, and provides a medium whereby the name of the Academy and what it stands for is ever before the administrative and teaching staffs of the dental and medical schools throughout the world. Our Proficiency Awards to date total 437. This undertaking merits our continued support.

* Presented before the Seventh Annual Meeting of the American Academy of Dental Medicine, Washington, D.C., June 26-28, 1953.

Your committee selected to explore the possibility of adoption of a Board of Certification in Dental Medicine continues its consideration of this subject. This matter is, of necessity, one requiring great deliberation.

A new committee formed this year has been accumulating names of essayists and clinicians who are available and willing to present a program for any of our Sections. For program chairmen in our various groups this offers an excellent opportunity to provide talent by our outstanding members for your Section meetings.

In our Section this year we are indeed fortunate to add the names of distinguished people to our list of Honorary Members. The Doctors Elmer V. McCollum and Ernestine Becker McCollum and Doctor Harold Keith Box are outstanding in their fields, and we welcome them into our Academy.

Most enjoyable visits were had by your President during the past year to Three Rivers, Quebec; Montreal, Quebec; Baltimore; and Philadelphia. Unofficial visits to New Jersey and New York were likewise enjoyed. These Sections are most active, and it is stimulating and refreshing to join with these groups in their activities. Truly, this is the way to see our Academy in action! It is hoped that leadership in our other Sections will be of such a calibre as to encourage the interest of members who, I am sure, would enjoy the exchange of professional ideas and social contacts which such gatherings would promote.

We can report progress in every activity in which we engage in our Academy. Inasmuch as the reports of the various committees that will follow become part of our permanent records, there is little need to refer to them in this message.

The following suggestions are offered for your considerations:

1. The traveling expenses incurred by men attending Trustee Meetings at times other than Annual or Semi-annual Meetings should be paid for out of the funds of the Academy.

2. The Secretary of each Section should have a complete list of members within his state. These men should be considered members of that Section, and should be made aware of all the Section's activities. Members in adjacent states where no Section exists should be invited into the Section nearest their location.

3. Again it is suggested that men in the profession of medicine should become active members if they so desire.

4. It is suggested that the President-elect serve as Chairman of the Sections Committee.

5. The need for securing the services of an Executive Secretary should be considered. This might be accomplished by a person serving on a part time basis with other organizations. The budgetary expense now alloted the various offices and committees could be pooled for this purpose.

To have been selected to be your President and to have served in that capacity for two years has been a rewarding experience.

To have been surrounded by such loyal friends and by men who have been untiring in their willingness and endeavor to counsel and advise has made the task lighter and most enjoyable.

I trust that the accomplishments of the past years have met with your approval.

AMERICAN ACADEMY OF DENTAL MEDICINE ANNUAL AWARD

Upon recommendation by their respective medical and dental colleges the following senior students have been nominated for the Award for Proficiency in Dental Medicine given annually by the American Academy of Dental Medicine. This award consists of a duly inscribed certificate and a five year subscription to the Journal of Dental Medicine.

MEDICAL SCHOOLS

Nominee	*Recommending Officer and School*
DIMITRI AFONSKY University of Rochester, School of Medicine and Dentistry, Rochester 20, New York.	G. H. Whipple, Dean, University of Rochester, School of Medicine and Dentistry.
DAVID F. AUSTIN 610 Laurel Avenue, Wilmette, Illinois.	Richard H. Young, Dean, Northwestern University Medical School.
ROBERT BAYSINGER 257 Roosevelt Avenue, Syracuse, New York.	Davis G. Johnson, Assistant Dean, State University of New York at Syracuse College of Medicine.
ROBERT J. BIRNKRANT, D.D.S. 361 State Street, Albany, N. Y.	James Allan Campbell, M.D., Dean, Albany Medical College, Albany, N. Y.
*MELVIN L. COHEN 5703 Hobart Street, Pittsburgh 17, Pennsylvania.	Richard H. Horn, Assistant Dean, University of Pittsburgh School of Medicine.
*LESTER MORRIS CRAMER 142 Robin Road, West Hartford 7, Connecticut.	Willard C. Rappleye, Dean, College of Physicians and Surgeons.
LEON MARTIN DIXON, JR. 100 Hull Street, Brooklyn 33, New York.	Joseph L. Johnson, Dean, Howard University College of Medicine.
DR. JAMES D. ESTES, JR. 258 West 12th, Tulsa, Oklahoma.	W. Clarke Wescoe, Dean, University of Kansas School of Medicine.
FRANK FITCH 5401 Ellis Avenue, Chicago 37, Illinois.	L. T. Coggeshall, Dean, Division of Biological Sciences, University of Chicago.
ROBERT RAY FRANKLIN 2314 Avenue M, Galveston, Texas.	D. Bailey Calvin, Dean of Students and Curricular Affairs, University of Texas.
JOHN U. GARDNER c/o R. E. Wheeler, 4622 Edgefield Road, Bethesda, Maryland.	J. A. W. Hetrick, Dean, New York Medical College.
*RAY GEORGE 1621 Monterey Road, South Pasadena, California.	B. O. Raulston, Dean, University of Southern California, School of Medicine..
EDWARD A. GRAYKOWSKI 2554 North 75 Street, Milwaukee 10, Wisconsin.	John S. Hirschboeck, Dean, Marquette University School of Medicine.
*EARL MURDOCK HEAD 2117 Village Drive, Louisville, Kentucky	George A. Wolf, Jr., Dean, University of Vermont College of Medicine.
NORMAN D. HENDERSON 22931 Allen Court, St. Clair Shores, Michigan.	Gordon H. Schott, Dean, Wayne University College of Medicine, Detroit, Michigan.
THOMAS H. HINDLE, III 190 Teaneck Road, Teaneck, New Jersey.	William N. Parkinson, Dean, Temple University School of Medicine.
JULIUS RAY IVESTER 201 Rutledge Avenue, Charleston, South Carolina.	John T. Cuttino, Dean, School of Medicine, Medical College of South Carolina.

* Nominee To Receive The Journal Only.

*SAM R. JOSEPH
51 Rhoda Ave., Youngstown, Ohio.

HARRY BUCHANAN JOHNSTON, JR.
812 Springdale Road, N.E., Atlanta, Georgia.

ROBERT C. KELLEHER
2006 Green Street, Philadelphia 30, Pennsylvania,

*RUDY J. LEONG
553 North Knott Street, Portland, Oregon.

RICHARD LEON LESTER, JR.
Pulaski, Tennessee.

HENRY R. LIGHT
Brooklyn, Iowa.

RICHARD LLOYD LILLARD, JR.
Shreveport, La.

CLAYTON K. MAMMEL
2206 Navarre Circle, Ann Arbor, Michigan.

RUDE K. MEISELMAN
1532 East Morehead Street, Charlotte, North Carolinia.

DR. LAWRENCE EDWARD MELTZER
Fancy Farm, Prospect, Kentucky.

*JOHN NELSON
R. R. #2, Hagerstown, Indiana.

DAVID JAMES PILLOW
1034 21st Street, South, Arlington, Virginia.

*DR. JACK ROSSEL POSTLE
3162 Indianola Avenue, Columbus, Ohio.

IRVING RAPPAPORT
4960 Marine Drive, Chicago 40, Illinois.

WILLIAM ROCK
c/o Stritch School of Medicine of Loyola University, 706 South Wolcott Avenue, Chicago 12, Illinois.

BEN SHEINER
230 Conklin Avenue, Hillside 5, New Jersey.

STEPHEN SLACHTA SLATON
8907 Eliot Avenue, Rego Park, New York, New York.

DR. THOMAS WILLIS SMITH
64 Trumbell Street, New Haven, Connecticut.

*JEROLD STEINHOUR
Quealy, Wyoming.

CHARLES A. STEVENS, JR.
635 Raymond Street, Westfield, New Jersey.

MELVIN SWAFFORD
Monette, Arkansas.

*RUFUS M. VAUGHN
666 Maple Street, Fairfield, Virginia.

James W. Colbert, Jr., M.D., School of Medicine, Saint Louis University, St. Louis 4, Mo.

G. Lombard Kelly, President, Medical College of Georgia.

George A. Bennett, Dean, Jefferson Medical College of Philadelphia.

D. W. E. Baird, Dean, University of Oregon Medical School.

John B. Youmans, Dean, Vanderbilt University School of Medicine.

Willis M. Fowler, Chairman, Executive Committee, State University of Iowa College of Medicine.

Dr. F. G. Gillick, Dean, The Creighton University School of Medicine, Omaha, Nebraska.

A. C. Firstenberg, Dean, University of Michigan Medical School.

Wilburt C. Davison, Dean, Duke University School of Medicine, Durham, North Carolina.

J. Murray Kinsman, Dean, University of Louisville School of Medicine.

John D. VanNuys, Dean, Indiana University School of Medicine.

Walter A. Bloedorn, Dean, George Washington University School of Medicine.

Charles A. Doan, Dean, Ohio State University School of Medicine.

Stanley W. Olson, Dean, University of Illinois School of Medicine.

John F. Sheehan, Dean, Stritch School of Medicine of Loyola University.

W. N. Hubbard, Assistant Dean, New York University College of Medicine.

Harold A. Taggart, Assistant Dean, Hahneman Medical College and Hospital, Philadelphia, Pennsylvania.

Thomas R. Forbes, Assistant Dean, Yale University School of Medicine.

James P. Tollman, Dean, University of Nebraska College of Medicine.

Lawrence Hanlon, Assistant Dean, Cornell University Medical College.

Hayden C. Nicholson, Dean, University of Arkansas School of Medicine.

James O. Foley, Associate Dean, Medical College of Alabama.

* Nominee To Receive The Journal Only.

HENRY L. WALL 1025 N. E. 16th Street, Oklahoma City, Oklahoma.	A. N. Taylor, Associate Dean in Charge of Student Affairs, University of Oklahoma School of Medicine.
JAMES HAROLD WATKINS, JR. 1864 South Hull, Montgomery, Alabama.	M. E. Lapham, Dean, Tulane University of Louisiana.
RICHARD LLOYD LILLARD, JR. Shreveport, La.	Dr. F. G. Gillick, Dean, The Creighton University, School of Medicine, Omaha, Nebraska.
ROBERT J. BIRNKRANT, D.D.S. 361 State Street, Albany, N. Y.	James Allan Campbell, M.D., Dean, Albany Medical College, Albany, N. Y.

DENTAL SCHOOLS

Nominee	*Recommending Officer and School*
FREDERICK BOYLE 4135 Buckingham, Detroit 24, Michigan.	Rene Rochen, Dean, University of Detroit, School of Dentistry.
MARVIN ARTHUR BRAMSON 4275 South VanNess, Los Angeles, California.	Robert W. McNulty, Dean, University of Southern California, School of Dentistry.
SHIRL A. BROWN 817 E. 88th Street, Seattle 5, Wash.	Ernest M. Jones, M.D., Dean, University of Washington School of Dentistry, Seattle 5, Wash.
WILLIAM E. CILUFFO 175 Barberry Terrace, Rochester, New York.	Leon J. Gauchet, Dean, University of Buffalo, School of Dentistry.
ROBERT C. CORDING 1354 Geddes Avenue, Ann Arbor, Michigan.	Paul H. Jeserich, Dean, University of Michigan, School of Dentistry.
*WARREN EMERSON DAY 1020 16th Avenue, Tuscaloosa, Alabama.	Joseph F. Volker, Dean, University of Alabama School of Dentistry.
ROBERT E. GOING 1229 Linden, Park Ridge, Illinois.	Allan, G. Brodie, Dean, University of Illinois, College of Dentistry.
ROBERT L. GRAY 1216 West Division Street, Grand Island, Nebraska.	James H. Pence, Dean, Creighton University School of Dentistry.
BOOKER T. GREER 212 Neuville Street, Center Texas.	W. H. Allen, Dean, Meharry Medical College, School of Dentistry.
GERALD E. HALKER 2363 St. Stephen's Road, Mobile, Alabama.	Frank J. Houghton, Dean, Loyola University, School of Dentistry, New Orleans.
GEORGE RAYMOND HILL Clarion, Iowa.	W. J. Simon, Dean, State University of Iowa, College of Dentistry.
ARTHUR HUBER 555 N. E. Fargo, Apt. 4, Portland, Oregon.	Erwin T. Bender, Chairman, University of Oregon Dental School.
FRANKLIN H. HUDSON, JR. 1438 Olive Street, Fresno, Cal.	Dr. E. Frank Inskipp, Dean, School of Dentistry, College of Physicians and Surgeons, 344-14th Street, San Francisco 3, Cal.
SHIRL A. BROWN 817 E. 88th Street, Seattle 5, Wash.	Ernest M. Jones, M.D., Dean, University of Washington, School of Dentistry, Seattle 5, Wash.
EDWARD THOMPSON FARRIS Arlington, Texas.	Dr. Harry B. McCarthy, Dean, Baylor University College of Dentistry, Dallas, Texas.
*IRWIN A. SMALL 42 Riverview Ave., Tarrytown, New York.	Maurice J. Hickey, D.M.D., M.D., Associate Dean, Columbia University, School of Dental & Oral Surgery, New York, N. Y.

* Nominee To Receive The Journal Only.

EDWARD J. JACKOWSKI
689 Westbury Avenue, Westbury, New York.

JACK STYLES KAMMER
537 North 19 Street, Milwaukee, Wisconsin.

WALKER KEMPER
1121 West Michigan, Indianapolis, Indiana.

R. H. KLEIN
2115 Folwell, St. Paul, Minnesota.

IRVING SIDNEY LEUIN
120 Venango Street, Johnstown, Pennsylvania.

WILLIAM F. LOVETT
1904 Key Boulevard, Arlington, Virginia.

CHARLES W. MARSH
712 Custer, Salina, Kansas.

WILLIAM EDWARD MURPHY
1739 G Street, Lincoln, Nebraska.

ROBERT BROWN PARKES
3943 Poplar Avenue, Memphis, Tennessee.

EUGENE ROBERT RABOGLIATTI
636½ North Broad Street, Globe, Arizona.

JOHN CHARLES RAY
722 Funston Avenue, San Francisco, California.

WILLIAM E. SALTER, JR.
1311 Sumter Street W., Columbia, South Carolina.

LEONARD SCHLOSSBERG
6408 13th Street, N.W., Washington, D. C.

RICHARD A. SIMMS
4433 Willow Street, New Orleans, Louisiana.

WILLIAM P. SIMS
1435 Kenwood Avenue, Camden, New Jersey.

NORMAN MARTIN STAROSTA
75 Lake Street, Webster, Massachusetts.

*W. C. STONE
121 East Green Street, Westminster, Maryland.

ROBERT WITACZACK
219 Elm Street, Perrysburg, Ohio.

GEORGE YOCUM
1757 West Harrison Street, Chicago, Illinois.

RAYMOND FRANCIS ZAMBITO
1160 70th Street, Brooklyn 28, New York.

L. R. Main, Dean, St. Louis University School of Dentistry.

O. M. Dresen, Dean, Marquette University School of Dentistry.

Maynard K. Hine, Dean, Indiana University School of Dentistry.

William H. Crawford, Dean, University of Minnesota, School of Dentistry.

W. F. Swanson, Associate Dean, University of Pittsburgh, School of Dentistry.

C. V. Rault, Dean, Georgetown University School of Dentistry.

Otto W. Brandhorst, Dean, Washington University, School of Dentistry, St. Louis, Missouri.

Bert L. Hooper, Dean, University of Nebraska, College of Dentistry.

James T. Ginn, Dean, University of Tennessee College of Dentistry.

Roy James Rinehart, Dean, University of Kansas City, School of Dentistry.

Willard C. Fleming, Dean, University of California, College of Dentistry.

Raymond E. Myers, Dean, University of Louisville, School of Dentistry.

Charles W. Freeman, Dean, Northwestern University Dental School.

Russell A. Dixon, Dean, Howard University, College of Dentistry, Washington, D. C.

G. D. Timmons, Dean, Temple University School of Dentistry.

Cyril D. Marshall-Day, Dean, Tufts College Dental School.

J. Ben Robinson, Dean, University of Maryland, Dental School.

Wendell D. Postle, Dean, Ohio State University, College of Dentistry.

A. Raymond Beralt, Dean, Loyola University, Chicago College of Dental Surgery.

Claus F. Hinck, Jr., Assistant Dean, New York University, College of Dentistry.

DENTAL SCHOOLS IN CANADA

Nominee	*Recommending Officer and School*
LORNE HENRY HEMMERICH 12 Park Street, Elmira, Ontario, Canada.	Roy G. Ellis, Dean, Faculty of Dentistry, University of Toronto.
RONALD PERRY MULLEN Rosetown, Saskatchewan, Canada.	William Scott Hamilton, Dean, Faculty of Dentistry, University of Alberta.

* Nominee To Receive The Journal Only.

D. E. MacLACHLAN 42 Lemarchant St., Halifax, N. S., Canada	J. Stanley Bagnall, Dean, Faculty of Dentistry, Dalhousie University, Halifax, N. S., Canada.
HARRY ROSEN 4123 St. Urbain Street, Montreal, Canada.	D. P. Mowry, Dean, Faculty of Dentistry, McGill University, Montreal.
JOHN SHINTANI 6683 Chabot Street, Montreal, Canada.	Ernest Charron, Dean, Faculty de Chirurgie Dentaire, Universite de Montreal.

MEDICAL SCHOOLS IN CANADA

Nominee	*Recommending Officer and School*
*R. H. DOUGALL 10842—70th Avenue, Edmonton, Alberta.	John W. Scott, Dean, University of Alberta, Faculty of Medicine.
*DORIS KAVANAGH 181 Marlborough Street, Ottawa.	A. L. Richard, Dean, University of Ottawa, Faculty of Medicine.
ALLAN M. LANSING 492 Tecumseh Avenue, London, Ontario.	G. E. Hobbs, Assistant Dean, University of Western Ontario, Faculty of Medicine.
GUY LEMIEUX 146 Notre-Dame, St. Jean, Co. Iberville, Quebec.	Wilbrod Bonin, Dean, University of Montreal, Faculty of Medicine.
H. N. A. MacDONALD New Aberdeen, Cape Breton, Nova Scotia.	H. G. Grant, Dean, Dalhousie University, Faculty of Medicine, Halifax.
JOAN DAPHNE WITNEY 324 Cumberland Avenue, Saskatoon, Saskatchewan.	G. Harold Ettinger, Dean, Queen's University, Faculty of Medicine, Kingston, Ontario.
*MAURICE CREPEAU St-Georges, (Beauce), Quebec, Canada.	Charles Vezina, M.D., Dean, Faculty of Medicine, Laval University, Quebec, Canada.

DENTAL SCHOOLS IN PHILIPPINE ISLANDS

Nominee	*Recommending Officer and School*
CAROLINA B. DULAY 482 Economia, Sampaloc, Manila.	Jose L. Referente, Dean, National University, College of Dentistry.
CORNELIO A. PARAFINA Ragay, Camarines Sur	Eladio R. Aldecoa, Dean, College of Oral and Dental Surgery, Manila.
*JUAN QUEJADA, JR. c/o University of the Philippines, College of Dentistry, Quezon City, Philippines.	Victorino G. Villa, Dean, University of the Philippines, College of Dentistry.

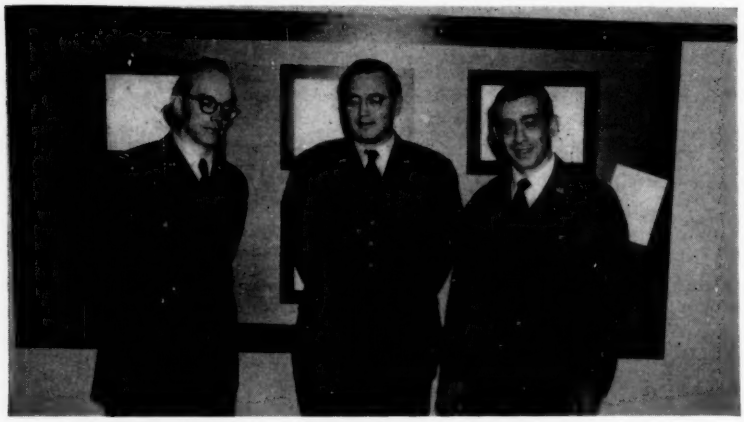
DENTAL SCHOOLS IN SOUTH AMERICA

Nominee	*Recommending Officer and School*
YOLANDA ALVAREZ G. Calle 14 #11-26 Armenia (Caldes) Colombia.	Dr. Arturo Gonzalez Ch., Director De la Biblio-Teca, Facultad de Odontolgia, Universidad de Antioquia, Medellin, Colombia.

* Nominee To Receive The Journal Only.

Academy Proceedings

ACADEMY MEMBERS MEET IN JAPAN



Several Academy members met at the Far East Dental Seminar sponsored by the Far East Air Logistical Forces at the United States Air Force Hospital at Tachikawa, Japan. Above are (left to right) Captains Jules Obin, Abraham A. Rothman, and Earl H. Shatzkin. The Academy of Dental Medicine was well represented at this three day seminar. Captains Obin and Rothman were part of a forum discussing "Preventive Dentistry," while Captain Shatzkin gave a clinic on "Occlusal Equilibration."

AMERICAN ACADEMY OF DENTAL MEDICINE ANNOUNCES MID-WINTER MEETING

The American Academy of Dental Medicine will hold its annual Mid-Winter Meeting and Luncheon at the Hotel Statler in New York City, on Sunday, December 6th, 1953. There will be a business meeting for members at 10 A.M. followed by a luncheon. The afternoon will be devoted to a symposium on "Geriatrics." The panel will be composed of both physicians and dentists. All members, interested dentists, and physicians are cordially invited. For further information write to:

WILLIAM H. COPPERTHWAITE, *Chairman*
36 Riverside Avenue
Red Bank, New Jersey

J. LEWIS BLASS HONORED

As one of many tributes on the completion of twenty-five years of achievement in dentistry, Dr. J. Lewis Blass, Past-President of the American Academy of Dental Medicine and Associate Professor of Periodontia at New York University College of Dentistry, was honored at a gathering of the members of the Periodontia Department of the College and their friends on May 21, 1953, at New City, New York. He was presented with a bronze plaque.

The citation read: To Doctor J. Lewis Blass, New York University College of Dentistry, from his colleagues of the Periodontia Department, as a token of esteem and affection for his twenty-five years of service to dentistry and for his loyalty, efficiency and outstanding contributions in the field of periodontia.

MAURICE MALSKY

It is with deep regret that the American Academy of Dental Medicine announces the passing of Maurice Malsky of New York, N. Y., on April 14, 1953 at the age of 33. He was a charter member of the Academy and was devoted to its aims and activities. Dr. Malsky attended Brooklyn College and New York University, and joined the Periodontia Department of New York University College of Dentistry upon his graduation in 1945. He brought to his teaching a stimulating and constructive experience based on his earlier mechanical and biologic interest. He was a good amateur biologist having done considerable work in field biology even after his graduation from dental college. The literature, departmental teaching and patient-teacher relations in periodontia were enriched by the knowledge, patience and inventiveness of Maurice Malsky. He is survived by his widow, Beatrice and two daughters.

The Academy membership extends its sincerest condolences to his family.

Announcements

POSTGRADUATE TRAINING IN PERIODONTIA AND ORAL MEDICINE NEW YORK UNIVERSITY COLLEGE OF DENTISTRY

The Periodontia Department of New York University College of Dentistry which has been giving postgraduate courses in this subject since 1926, announces its full time course in Periodontia and Oral Medicine for one academic year, September 21st, 1953 to May 21st, 1954, leading to a certificate. Half-time two year courses are also given.

A three weeks full time refresher course starting May 31st, 1954 is given; also a ten session (one evening weekly) introductory course begins October 7th, 1953 and February 24th, 1954. All courses are under the direct supervision of Dr. Samuel Charles Miller.

For information concerning the above or courses in other phases of dentistry write to Secretary, Postgraduate Division, New York University College of Dentistry, 209 East 23rd Street, New York 10, N. Y.

TUFTS COLLEGE DENTAL SCHOOL DIVISION OF GRADUATE AND POSTGRADUATE STUDIES

Tufts College Dental School announces its Graduate and Postgraduate program for the academic year 1953-54. Professor Irving Glickman and staff are offering several courses in Periodontology while Dr. Louis Alexander Cohn will supervise three different courses in Occluso-Rehabilitation during the academic year.

For further information and application, write to:

Director of Graduate and Postgraduate Studies
Tufts College Dental School
136 Harrison Avenue
Boston 11, Mass.

INTERNATIONAL ACADEMY OF ANESTHESIOLOGY

The next meeting of the International Academy of Anesthesiology will take place on Wednesday, October 7th, 1953 at the Hotel Statler, 33rd Street and Seventh Avenue, New York City, at 8 P.M.

Information concerning membership in the International Academy of Anesthesiology can be obtained from Dr. Irwin G. Tomack, Executive Secretary, 355 East 149th Street, New York 55, New York.